

### ABSTRACT

A system and method for multiple antennas on a single core. The system may include a first core, a first winding wound about the first core for transmitting/receiving electromagnetic signals, and a second winding for transmitting/receiving electromagnetic signals wound about the first core and the first winding. The first winding and the second winding may be wound such that a direction of a first magnetic field generated by the first winding is different than a direction of a second magnetic field generated by the second winding. The system may also include activation circuitry connected to the first winding and the second winding. The activation circuitry may activate the first winding separately from the second winding. The system may be expanded to three or more coils/antennas disposed on a single core.